Educational Systems and the Continuum of Care for the Older Adult

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Abstract: This article outlines educational developments for adaptive and adapted work roles, current educational systems and practice, and aspects of educational research to illuminate issues for the future of geriatric oral health and well-being. The concept of work roles is used as a proxy to point up continuity of care issues, albeit limited, for patients/clients/consumers. Interdisciplinary learning for the initial education of dental providers/team members requires review with specific reference to geriatric care. Experienced dental and other health and social care professionals should review their roles in meeting the oral health needs of the aging cohorts. The relationship of dental schools/faculties in higher education institutions to those organizations that deliver education to various health and social care sectors—the personnel being at key points in the delivery of care—is also worthy of review.

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When conceptualizing improvement in the health and well-being of older adults, we could ask what work (for want of a better word and paradigm) needs to be done to benefit individual patients, the public, and societies. The impact of social determinants and common risk factors on health including oral health is well recognized.[1] Which actors are seeking expansion of the workforce, role extension, and task substitution in health/oral health and social care sectors and why?[2-4] Which policy agendas will drive change, and which will not? Consumers and politicians have been seeking better access to oral health services and quality care; are they getting it?

Developments in information communication technology in terms of strategy and infrastructure have the potential to reshape work practices in relation to geriatric oral health care—for example, in relation to evidence-based preventive practice. There are educational implications for new knowledge to translate into provider behaviors.

Interestingly, there is evidence from the United Kingdom that older people are positive towards receiving care in their own homes.[2] However, there is research that indicates dentists are reluctant to treat frail and functionally dependent elderly persons,[5] and dentists' leaving their practices to provide care has been expressed as an inconvenience.[6]

I want to engage primarily with educational issues in this article and link educational developments for adaptive and adapted work roles, current educational systems and practice, and aspects of education research in order to illuminate issues for the future of geriatric oral health and well-being. The concept of work roles is used as a proxy to point up continuity of care issues, albeit limited, for patients/clients/consumers. Workforce costs comprise substantial proportions of health care budgets.

Relationship Between Education and Required Work Practices

How have the health professions that serve individuals and the public developed? Do new types of workers emerge informally based on experiential learning until it is acknowledged that formally recognized educational qualifications and appropriate role titles are required and career frameworks developed? Are those people with a professional or personal interest in education involved in planning changes to the workforce; if so, in what capacity, why, and when? Which other stakeholders are interested in oral health agendas?

Within the nursing profession, there are new and adapted roles in the complex environment of general health care, and there has been a good deal of acceptance of the new roles because of the objective need for them. Workforce profiles for social care have also been described and evaluated.[2]

Given the sociodemographic trends for populations around the world, it is imperative that sufficient numbers of competent dental and other health and social care professionals are mobilized to meet the oral health needs of aging cohorts. In Australia, Dooland[7] reported on a study of health assessors who visited older people in their homes in South Australia and, based on the assessments, referred the individuals to public funded dental services. In the United States, McKinnon et al.[4] described educational issues and dental workforce models for the following: advanced dental hygiene practitioner, community dental health coordinator, and dental health aide therapist. These types of patterns and proposals for education and workforce developments are aligned with contemporary themes related to the quality of care involving access to services and oral health promotion related to investment, capacity, partnership, and alliance building.[8]

Initial Education for Dental Providers/Team Members

Many questions can be asked about how dental professionals are to be educated from the perspective of roles and responsibilities in population-level agendas. Should the typical intra-clinic service delivery mode of operation be supplemented by outreach services and health interventions (and if so which services and interventions), and how should elements of a dental team member's education facilitate this? Will a curriculum focus on public health skills involving, for example, health promotion and the design, development, and evaluation of community programs[9] be effective in influencing dental practice patterns alone or together with professional business planning and management skills?

Outreach Teaching and Progressive Educational Developments

Outreach teaching components of curricula are well established, and the concept of putting education where the services need to be has been promoted for new dental school developments.[10] This contextual element to educational opportunities is an important issue that requires further research. Outreach dental education of predoctoral students to residential aged care facilities does occur as discussed at the workshop pertaining to outreach teaching held at the International Association for Dental Research (IADR) Annual Meeting held in Brisbane in 2006. Given limitations in the direct provision of care, observation may be of value for students. The availability of patients may be subject to daily local factors such as resident cooperation.[11] Walmsley et al.[12] reviewed the place of student electives in the undergraduate curricula in the United Kingdom and concluded that if "the elective has a formal assessment process then it will be seen as important, as the effort of the student will be recognised."

Since the publication of the 1993 Nuffield Foundation report, *Education and Training of Personnel Auxiliary to Dentistry,*[13] there have been substantial developments in the education of the dental team in the United Kingdom and Australia. The education of members of the dental team has also been progressively integrated into tertiary education structures in Australia, and the Australian Dental Council regularly reviews these courses.[14] The interfaces between members of the dental team in the United Kingdom are to be reviewed as part of consultation by the General Dental Council, United Kingdom, entitled Scope of Practice, in part to simplify such matters.[15] These types of review may have implications for both contemporary education and suitable geriatric oral services provision, including domiciliary services.

The vision for the initial curricula for dental team members should also be influenced by the potential interfaces between dental professionals and other registered and nonregistered health and social care workers. Older patients/clients/consumers are increasingly likely to be users of other medical and social services. Appropriate relationships will perhaps simplify the development of staffing models, prevent duplication of services, and improve the quality of care in such areas as diet and nutrition. Self-care and sustainability of services are important in this regard.

Interdisciplinary Care and Learning

Further issues to consider for initial dental curricula are that whilst communication pathways and role definition between dental professionals and support staff in small dental and medical practices might be well defined (including computerized prescriptions and referral for services to intraclinic team members and to dental and medical specialists and consultants), when the care involves crossing from health to social care or private as compared to public funding, the working relationships and ethical

responsibilities may not be clear. But good interdisciplinary continuity of care models do exist—for example, in relation to craniofacial abnormalities. The implementation of evidence-based clinical guidelines for the management of a chronic disease such as Type 2 diabetes[16] may serve as useful reference models when considering educational developments for the qualifying educational phase of dental team members.

Interdisciplinary (or interprofessional) learning and the role of science and evidence pose contemporary challenges for educational systems for improvement of health, oral health, and well-being for older adults. If an outcomes perspective is taken, is it the structure of a predental degree course followed by the dental degree that promotes relevant outcomes or specific aspects of vertical and horizontal integration within curricula?[17,18] Is it the location of schools of dentistry/dental sciences within health faculties of universities that can best accommodate cross-fertilization of innovation, or is it academic and professional dental leadership that performs this role? The relationship of dental schools/faculties in higher education institutions to those organizations that deliver education to various health and social care sectors—the personnel being at key points in the delivery of care—is worthy of review.

There has been relatively little educational research that addresses interprofessional learning of dental students and non-dental professionals. A conclusion in a study of cross-professional education at the recently opened School of Dentistry and Oral Health, Griffith University, Australia was that first-year students "need to be encouraged to experience the advantages of cross-professional education if a team approach to dentistry is going to move from rhetoric to reality."[19]

Additional Education for Licensed Dental Team Members

There are a variety of vocational training programs, formal certificates, diplomas, master's and doctoral degrees, and fellowship programs for ongoing study by dental team members. Some programs lead to specialist recognition, such as the specialist in special needs dentistry in Australia[20] and Brazil.[21] In the United Kingdom, dental nurses may qualify for a certificate in special care dental nursing recognized by the National Examination Board for Dental Nurses.[22] Dentists with special interests are formally recognized in the United Kingdom, with the potential for new relationships with purchasing bodies for services provided. This type of model may have implications for the provision of geriatric oral health services in areas of need on a local basis—for example, for the frail and dependent older person.[23]

There is evidence that provider behavior is a factor that impacts access to services for older people,[5] and the educational experiences of general dentists have been linked to their patterns of treatment for special needs patients.[24] Whether customized continuing professional development programs would substantially affect access to services and what types of additional enablers are necessary to support increased access for patients remain underresearched.

Any major role change for a dental team member should not involve working beyond one's competence and capability. Delivering services outside the usual practice setting is likely to involve special organizational arrangements, which relate to a different skill set as compared to, for example, the introduction of a new restorative material into practice.

Despite potential criticism of traditional short courses and conferences for the professional development of dentists, this mode of delivery remains popular for regular professional updating,[25] and there is evidence that dental practitioners believe that this mode of delivery has an impact on practice.[26,27] Chambers[28] called for further consideration of work-based learning for dentists. The concept of education in the work setting, in which educational theory and processes are embedded in work domains, may help form the bridge to improve the relationship of the provision of current discrete packages of continuing dental education to improvements in the dental workplace outcomes, whether they be quality of care, patient safety, patient health, or provider/staff-based outcomes. Recently, the role of reflection on learning has been discussed in relation to implementing learning from continuing professional development[29] and reflection and experiential learning itself within practices for the dental team.[30] The profile of blended or flexible learning has also been raised in recent years for formal postgraduate dental courses and continuing dental education with emphases on mixing information technology and other teaching and learning methods.[31]

It would seem important for dental teams to understand learning and educational processes them-

selves to maximize the benefits of education per se and its links to other processes in relation to their roles, including management issues, particularly in this era of information and evidence-based practice. Perhaps an important issue for university-based dental schools is the relevance of academic learning and its relationship to continuing professional education and lifelong learning for the practicing profession, perhaps for the very reason that universities are conceptualized as academic institutions.

Continuing professional development courses are offered by a suite of providers in various countries. Postgraduate deaneries in England provide extensive programs.[32] The Federation Dentaire International has recently developed guidelines to assist national dental associations in developing continuing professional development programs.[33]

Interdisciplinary and interprofessional efforts to facilitate appropriate care for the elderly involving dental team members are important from the perspective of continuing professional education and course planning. Design and selection of suitable speakers are important. There are research studies that demonstrate improved oral health outcomes for elderly residents of aged care facilities associated with the delivery of continuing education to, for example, care staff.[34] The planning of systemwide delivery of such education is an issue requiring further study. This might include the relationship of traditional higher education institutions with vocational training colleges, macro and micro educational package development and practical issues such as nursing home accreditation standards, staff turnover in residential accommodation, staff role satisfaction, and service safety-net issues for older people with disabilities. Guidelines for the development of local standards of oral health care for people with dementia have been developed in the United Kingdom.[35] The questions arise as to what extent these guidelines have been implemented and what the outcomes are for patients.

Across the Educational Spectrum: Sentinel Issues

Developing an appropriate critical mass for geriatric dental education and associated educational research issues may involve the development of intracountry centers of excellence (or international centers) that may have virtual components with a commitment of the graduating pool to disseminate and implement what they have learned as appropriate. However, national regulations regarding the recognition of clinical qualifications may influence work practices and pose barriers to the effective mobility of dental personnel between countries. The International Federation of Dental Educators (IFDEA) has considered quality assurance and mutual recognition of qualifications.[36]

Developments in information technology and distance learning may help, but the context of learning, particularly in relation to a variety of cultural issues, should be considered carefully. Continuing professional education may be usefully enhanced with the use of information technology and distance learning. Quality assurance for educational initiatives at both the macro and micro levels is essential.

An Educational Research Agenda to Improve Geriatric Oral Health

A goal of the two linked IADR and American Association for Dental Research (AADR) symposia in 2008, jointly sponsored by the Education Research Group (IADR) and Geriatric Oral Research Group (IADR), is to develop an educational research agenda aligned with the World Health Organization priorities for the health and well-being of older adults. I have recently contemplated the concept of educational services research, which could be compared to the domain of health services research; however, given the relatively small amount of dental education research undertaken, this type of research should remain under the umbrella term "educational research." An educational services research focus may help take forward study agendas relating to the impact of educational issues on access to community-based services for dependent elderly people and development of training packages for carers to improve oral health and well-being for older persons. The educational research studies should effectively engage with domains for implementation and the delivery of health interventions and care.

An important issue for educational research, I believe, is to ensure that the research study design is optimized for the context. Thus, the applicability of multi-method research and whole of system research[37] should be considered for its potential value, together with benchmarking the design against

evidence-based research guidelines. Whether evaluation studies are classified as internal or external[38] and sources for study data, including the development of sampling frames, are also important.

Also, for taking forward educational research issues to promote health and well-being for the geriatric population, I believe communication between stakeholders and predictable funding are key.

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